

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) An isolated nucleic acid selected from the group consisting of:
 - (a) a nucleic acid comprising the coding region of a nucleotide sequence selected from the group consisting of SEQ ID NOs:1[[,]] and 11,~~and 13~~;
 - (b) a nucleic acid encoding a protein comprising an amino acid sequence selected from the group consisting of SEQ ID NOs:2[[,]] and 12,~~and 14~~;
 - (c) a nucleic acid encoding a protein comprising a modified sequence of an amino acid sequence selected from the group consisting of SEQ ID NOs:2[[,]] and 12,~~and 14~~, wherein the protein encoded by said nucleic acid ~~retains the biological activity of the protein comprising the amino acid sequence of SEQ ID NO:2, and 12, or 14~~ comprises a bHLH domain, functions as a bHLH type transcription factor, and differs from SEQ ID NO:2 or 12, respectively, by mutation at no more than 100 positions;
 - (d) a nucleic acid that (i) hybridizes in 6x SSC (0.9 M sodium chloride, 0.09 M sodium citrate), 0.5% SDS, 10 mM EDTA, 5x Denhardt's solution (0.1% (w/v) Ficoll, 0.1% (w/v) polyvinylpyrrolidone, 0.1% (w/v) BSA), 10 mg/ml denatured salmon sperm DNA at 60° ~~under stringent conditions to a sequence comprising to a probe consisting of the complement of~~ a nucleotide sequence selected from the group consisting of SEQ ID NOs:1[[,]] and 11,~~and 13~~, (ii) is at least 90% identical to SEQ ID NO:1 or 11, and (iii) encodes a protein that ~~retains the biological activity of a protein comprising the amino acid sequence of SEQ ID NO:2, 12, or 14~~ comprises a bHLH domain and functions as a bHLH type transcription factor; and

(e) a nucleic acid encoding a partial peptide of a protein selected from the group consisting of SEQ ID NOs:2[[,]] and 12, and 14 that differs from the sequence of one of SEQ ID NO:2 or 12 at no more than 100 positions.

2. (Currently amended) The nucleic acid of claim 1(c), wherein the modification referred to in part (c) is a substitution or deletion of less than 20 amino acid residues in the sequence of SEQ ID NO:2[[,]] or 12, or 14.

3. (Currently amended) The nucleic acid of claim 1(c), wherein the modification referred to in part (c) is a conservative substitution of one or more amino acids in the sequence of SEQ ID NO:2[[,]] or 12, or 14 with one or more amino acids that allows the properties of a corresponding amino acid side chain to be conserved.

4. (Currently amended) The nucleic acid of claim 1(c), wherein the modification referred to in part (c) is an addition of one or more amino acids to the sequence of SEQ ID NO:2[[,]] or 12, or 14 that results in a fusion protein.

5. (Original) A vector into which the nucleic acid of claim 1 is inserted.

6. (Currently amended) A transformant cell carrying the nucleic acid of claim 1.

7. (Withdrawn) A substantially pure protein or peptide encoded by the nucleic acid of claim 1.

8. (Withdrawn) A method for producing a protein or peptide encoded by the nucleic acid of claim 1, comprising the steps of:

- (a) culturing a transformant carrying the nucleic acid of claim 1 or a vector into which the nucleic acid of claim 1 is inserted;
- (b) allowing the transformant to express the protein or peptide; and
- (c) recovering the expressed protein or peptide from the transformant or culture supernatant.

9. (Currently amended) An isolated nucleic acid comprising at least 15 nucleotides, wherein the nucleic acid is completely complementary (a) to at least a portion of a nucleotide sequence comprising a sequence selected from the group consisting of SEQ ID NOs:1[[,]] and 11, and 13 that includes the translation initiation codon of SEQ ID NO:1 or 11, respectively, or (b) to the complementary strand of (a) thereof.

10. (Currently amended) ~~The~~ An isolated nucleic acid ~~of claim 9, wherein the nucleic acid is completely complementary to a continuous region of at least 15 nucleotides in the sequence of SEQ ID NO:1, 11, or 13, or that~~ has a homology of at least 70% to the sequence of SEQ ID NO:1[[,]] ~~or 11 or 13~~ and encodes a polypeptide that comprises a bHLH domain and functions as a bHLH type transcription factor.

11. (Withdrawn) A method of screening for a compound that binds to the protein or peptide of claim 7, comprising the steps of:

- (a) contacting a test sample containing at least one compound with said protein or partial peptide;
- (b) detecting the binding activity of said protein or partial peptide with a compound in the test sample; and
- (c) selecting a compound that has a binding activity to said protein or partial peptide.

12. (Withdrawn) A compound that binds to the protein or peptide of claim 7.
13. (Withdrawn) The compound of claim 12, wherein said compound is an antibody.
14. (Withdrawn) The compound of claim 12, wherein said compound is isolated by a method comprising the steps of:
 - (a) contacting a test sample containing at least one compound with said protein or partial peptide;
 - (b) detecting the binding activity of said protein or partial peptide with a compound in the test sample; and
 - (c) selecting a compound that has a binding activity to said protein or partial peptide.
15. (Currently amended) A transformant cell carrying the vector of claim 5.
16. (New) The nucleic acid of claim 1, wherein the nucleic acid comprises the coding region of a nucleotide sequence selected from the group consisting of SEQ ID NOs:1 and 11.
17. (New) The nucleic acid of claim 1, wherein the nucleic acid encodes a protein comprising an amino acid sequence selected from the group consisting of SEQ ID NOs:2 and 12.
18. (New) The nucleic acid of claim 1, wherein the nucleic acid encodes a protein consisting of an amino acid sequence selected from the group consisting of SEQ ID NOs:2 and 12.

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19. (New) An isolated nucleic acid that encodes a polypeptide comprising a bHLH domain of a protein selected from the group consisting of SEQ ID NOs:2 and 12.